

ABSTRACT

A unitarily formed diverter valve assembly for use in liquid chromatography. The valve assembly comprises a plurality of inlet and outlet ports, diverter valve systems, chambers, and a tortuous network of passageways all of which are arranged to accommodate the flow of fluids in a liquid chromatography system. The valve assembly is configured so as to direct the flow of fluid coming from an inlet port through the valve body where it can then be reversibly directed into or out of a chromatography column. On returning from the column, the fluid reenters the valve assembly where it is directed to an outlet port in order to exit the system. The valve assembly can also be configured so as to bypass the column altogether. Since the entire valve assembly is machined out of a single block of material having smooth liquid passageways, and since all flow compartments are shared and fully flushed when a flow-through valve is opened, dead-legs are virtually eliminated from the system.